

**FIGURE 1: ISS-pST gene construct**

1   GCTAGCATGG CCCTGTGGAT GCGCCTCCTG CCCCTGCTGG CGCTGCTGGC  
5    CCTCTGGGGA CCTGACCCAG CCGCAGCCCT CGAGATGTTT CCAGCTATGC  
101   CACTTTCTTC TCTGTTCGCT AACGCTGTT TCAGGGGCCA GCACCTGCAC  
151   CAACTGGCTG CCGACACCTA CAAGGAGTTT GAGCGCGCCT ACATCCCAGA  
201   GGGACAGAGG TACTCCATCC AGAACGCCA GGCTGCCTTC TGCTTCTCGG  
251   AGACCATCCC GGCCCCCACG GGCAAGGACG AGGCCCAGCA GAGATCGGAC  
10    GTGGAGCTGC TGCGCTTCTC GCTGCTGCTC ATCCAGTCGT GGCTCGGGCC  
351   CGTGCAGTTC CTCAGCAGGG TCTTCACCAA CAGCCTGGTG TTTGGCACCT  
401   CAGACCGCGT CTACGAGAAAG CTGAAGGACC TGGAGGAGGG CATCCAGGCC  
451   CTGATGCGGG AGCTGGAGGA TGGCAGCCCC CGGGCAGGAC AGATCCTCAA  
501   GCAAACCTAC GACAAATTG ACACAAACTT GCGCAGTGAT GACGCGCTGC  
15    551 TTAAGAACTA CGGGCTGCTC TCCTGCTTCA AGAAGGACCT GCACAAGGCT  
601   601 GAGACATACC TGCGGGTCAT GAAGTGTGCG CGCTTCGTGG AGAGCAGCTG  
651   TGCCTTCTAG TCTAGA (SEQ ID NO:3)

- 20   ATG...GCC- insulin secretory signal.  
GCTAGC- *Nhe* I restriction site incorporated into construct in order to ligate into plasmid.  
CTCGAG- *Xho* I restriction site incorporated into construct in order to ligate secretory signal and pST.  
25   TCTAGA- *Xba* I restriction site incorporated into construct in order to ligate into plasmid.



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**FIGURE 2: ISS-pST peptide sequence.**

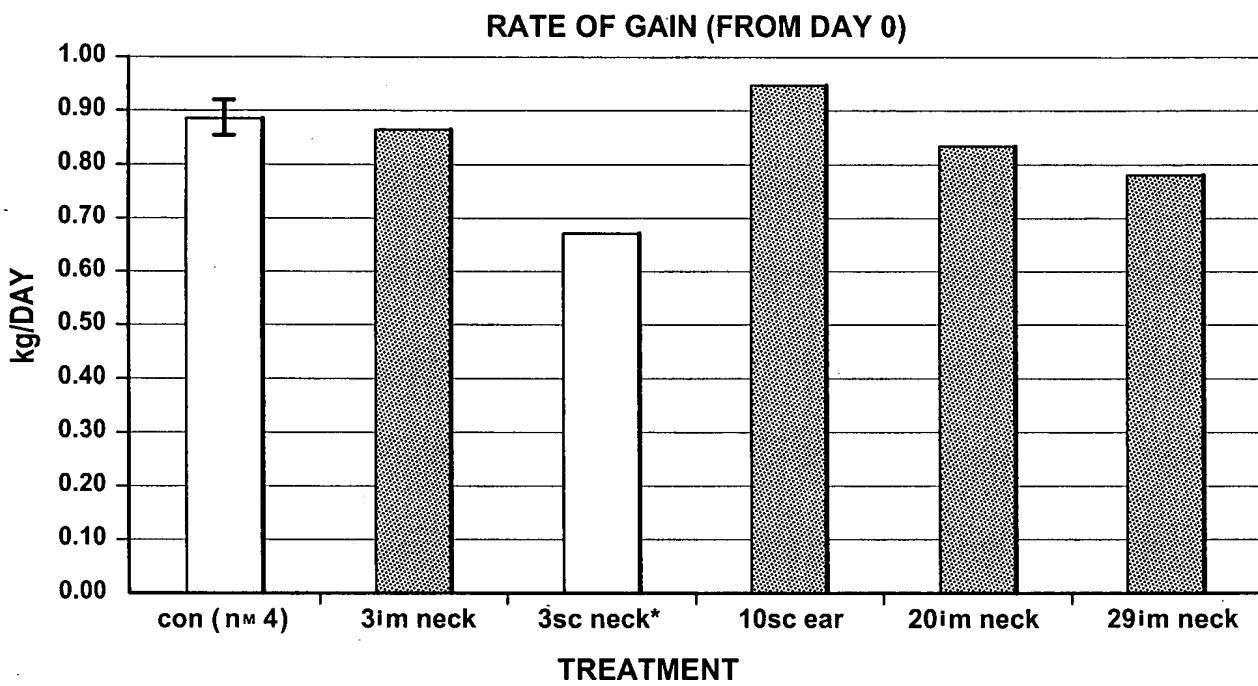
1   MALWMRLLPL LALLALWGPD PAAALEMFPA MPLSSILFANA VLRAQHLHQL  
5    51   AADTYKEFER AYIPEGQRYS IQNAQAAFCF SETIPAPTGK DEAQQRSDVE  
101   101   LLRFSLLLQ SWLGPVQFLS RVFTNSLVFG TSDRVYEKLK DLEEGIQALM  
151   151   RELEDGSPRA GQILKQTYDK FDTNLRSDDA LLKNYGLLSC FKKDLHKAET  
201   201   YLRVMKCRRF VESSCAF    (**SEQ ID NO:2**)

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MAL....AAA- insulin secretory signal, cleaved upon secretion of pST.  
LE- function of XhoI cleavage site; result in no predicted secondary structural changes to pST.

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**Fig. 3**

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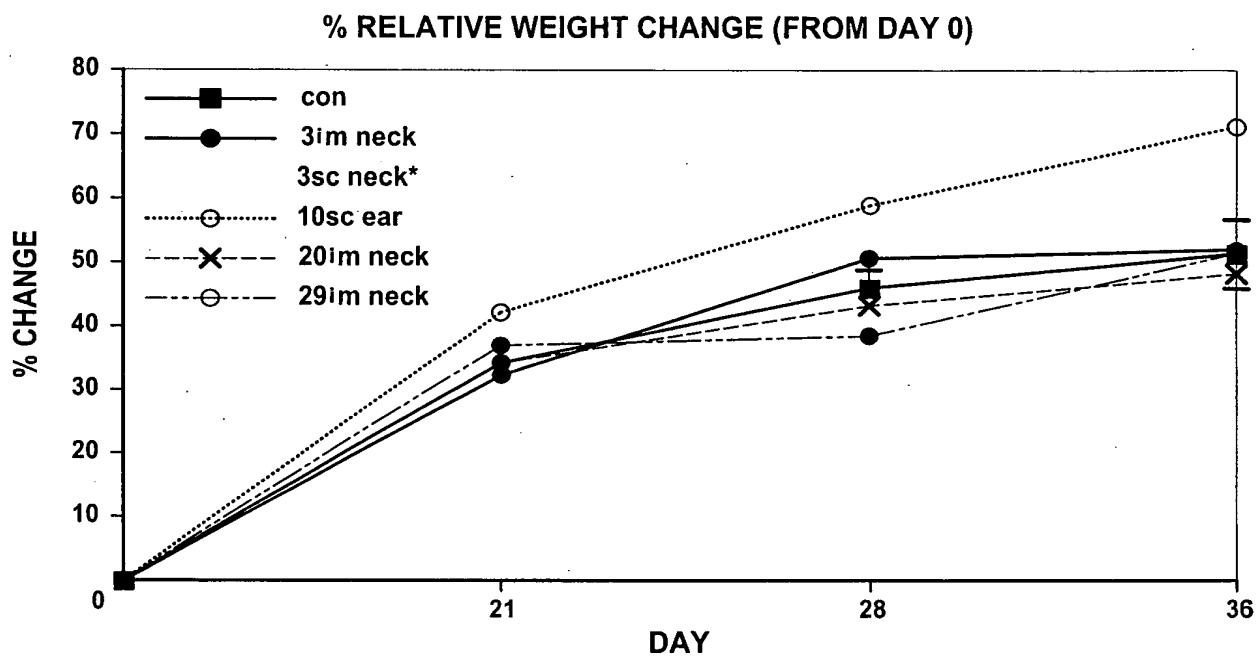


Fig. 4

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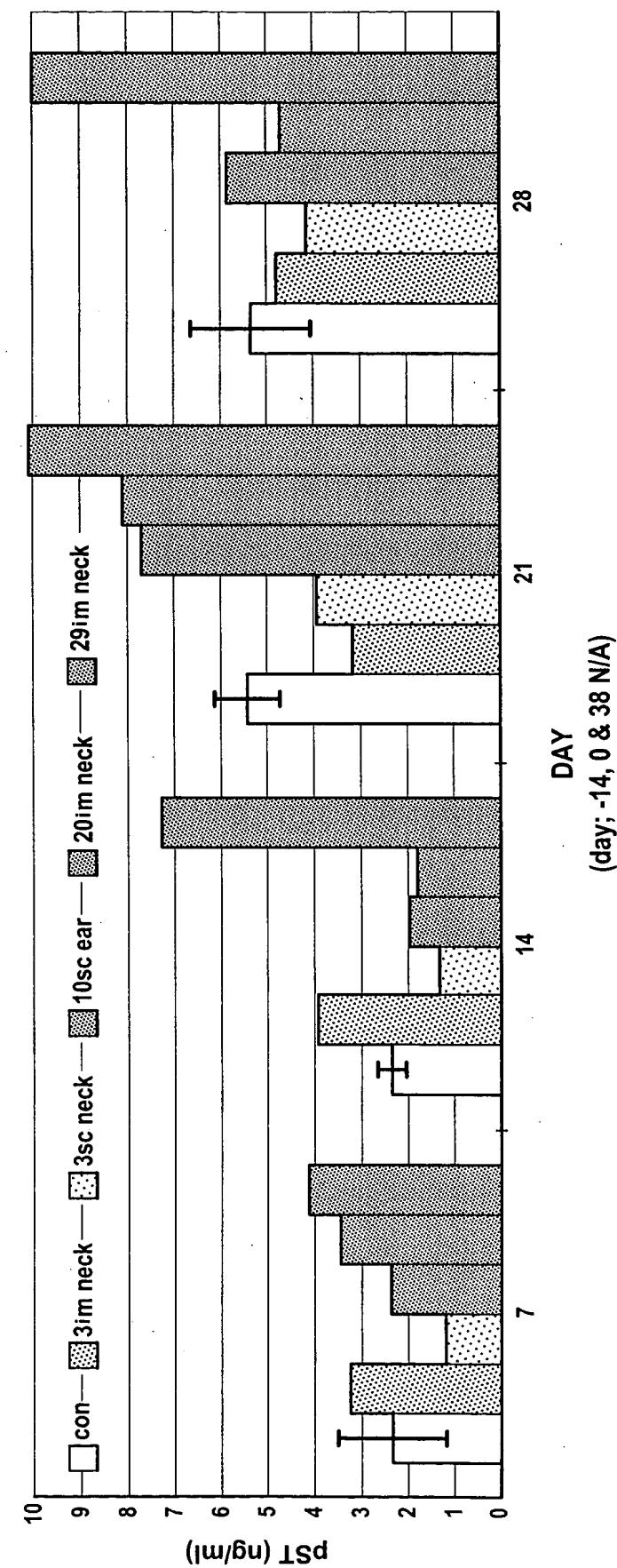
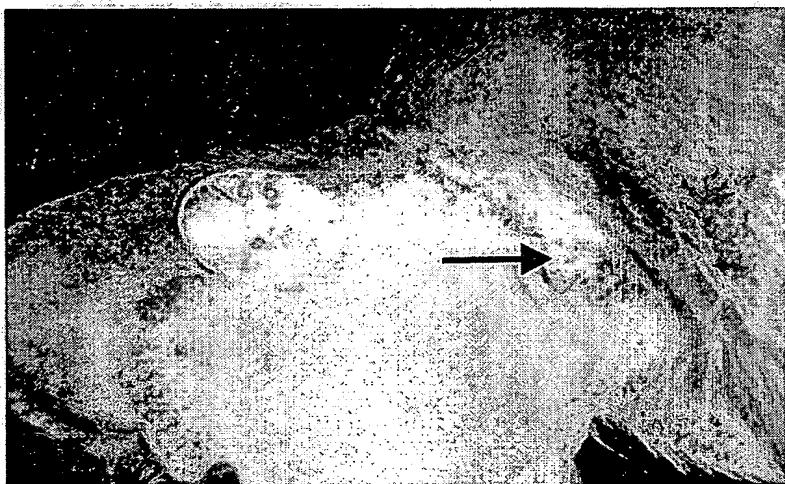


Fig. 5

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**Plate 1**



**Plate 2**



**Fig. 6**

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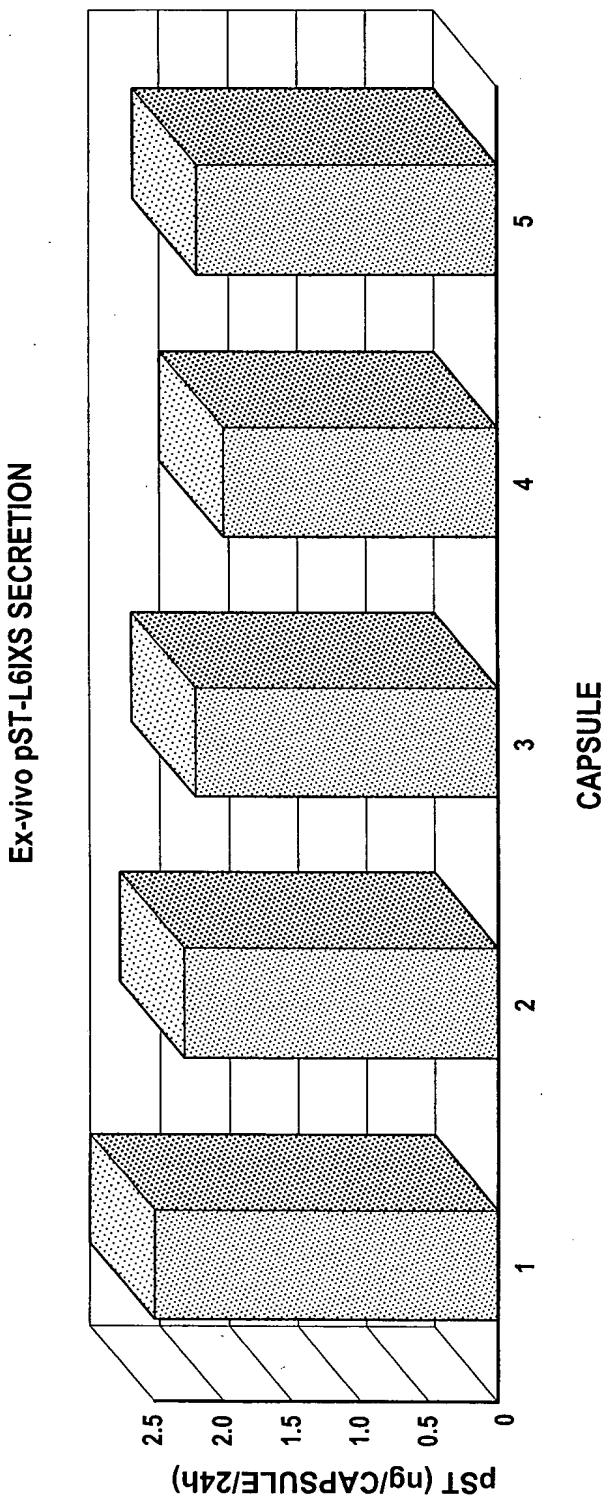


Fig. 7

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MEAN PLASMA pST (OVER 3 HOURS @ 30 min. INTERVALS) BEFORE (WHITE BARS)  
AND 1 WEEK POST pST CAPSULE ADMINISTRATION (BLACK BARS) (\* SIGNIFICANT).

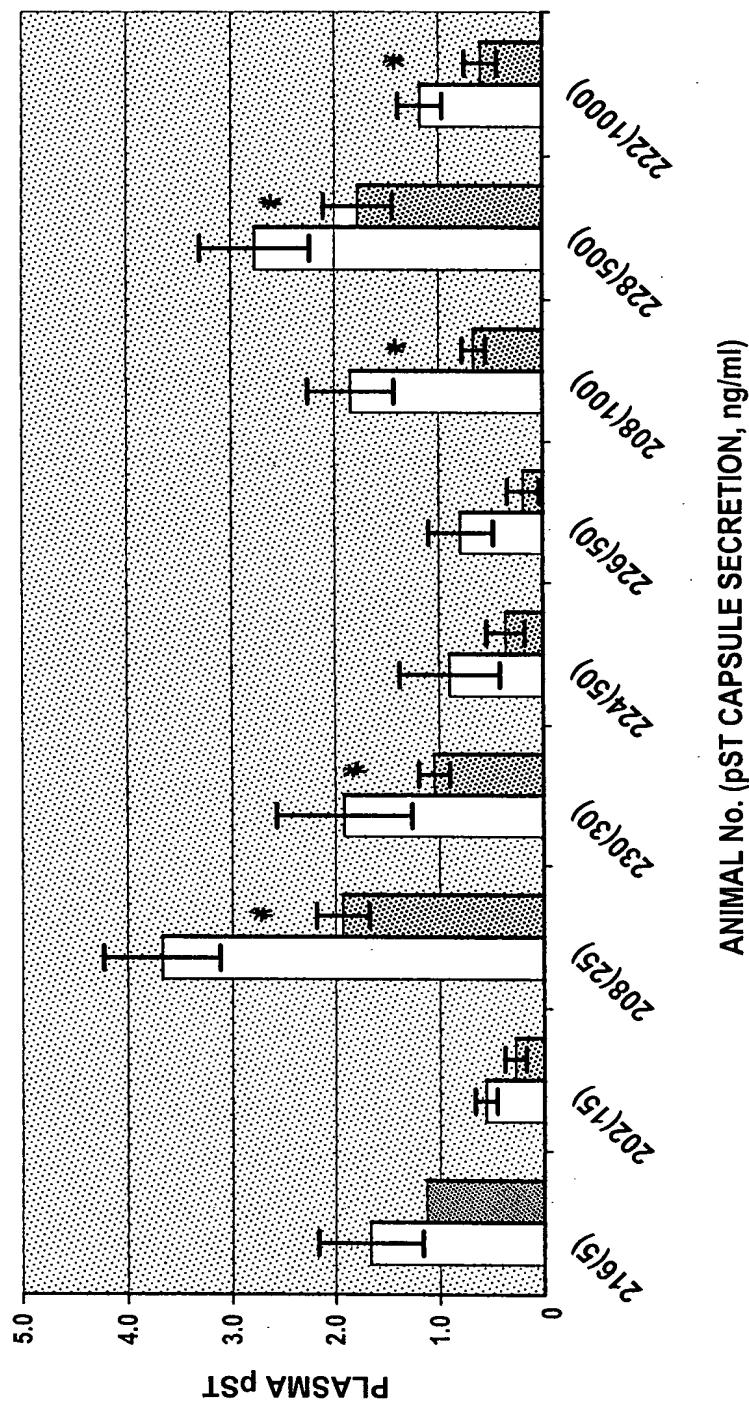


Fig. 8

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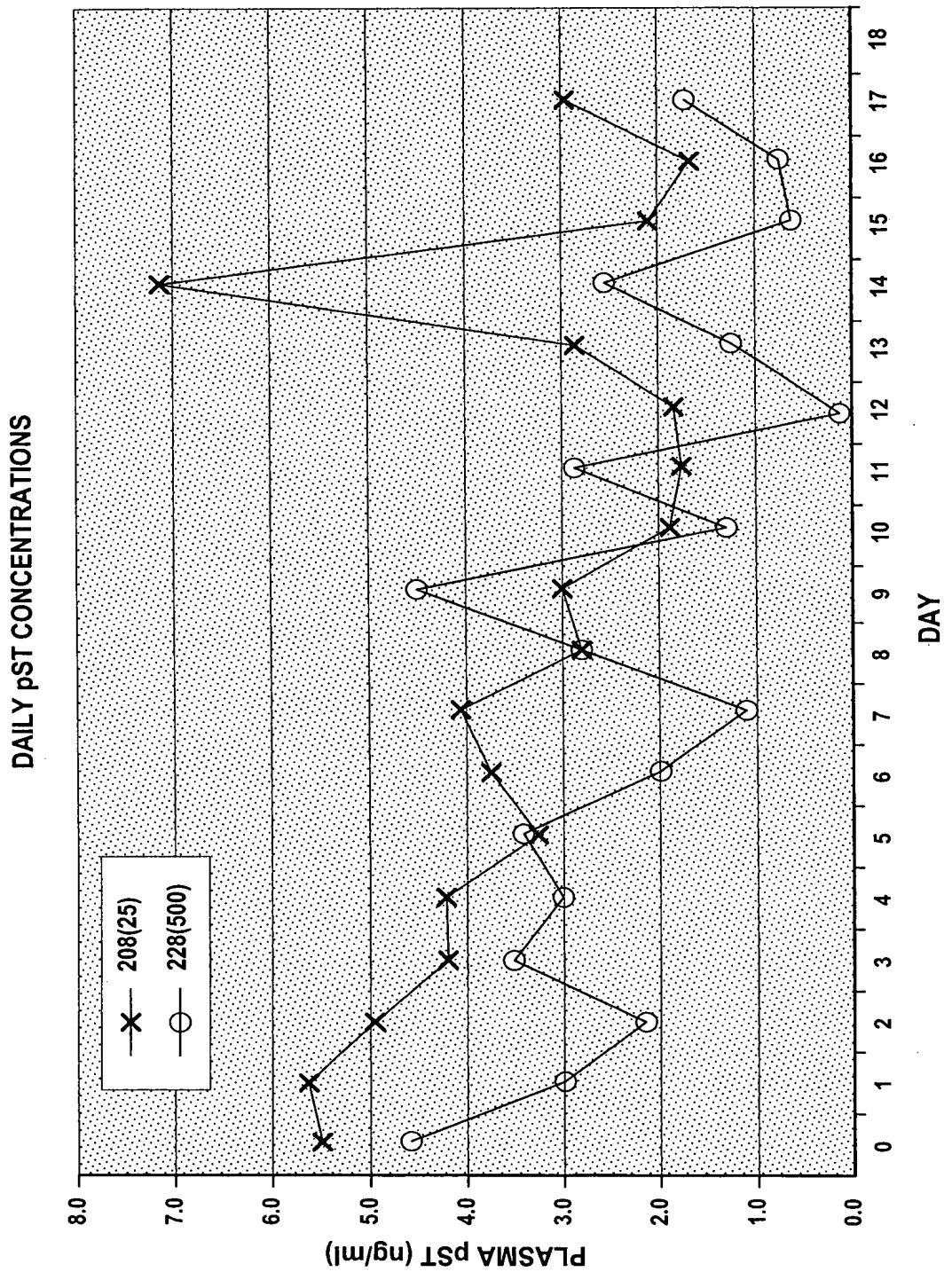


Fig. 9

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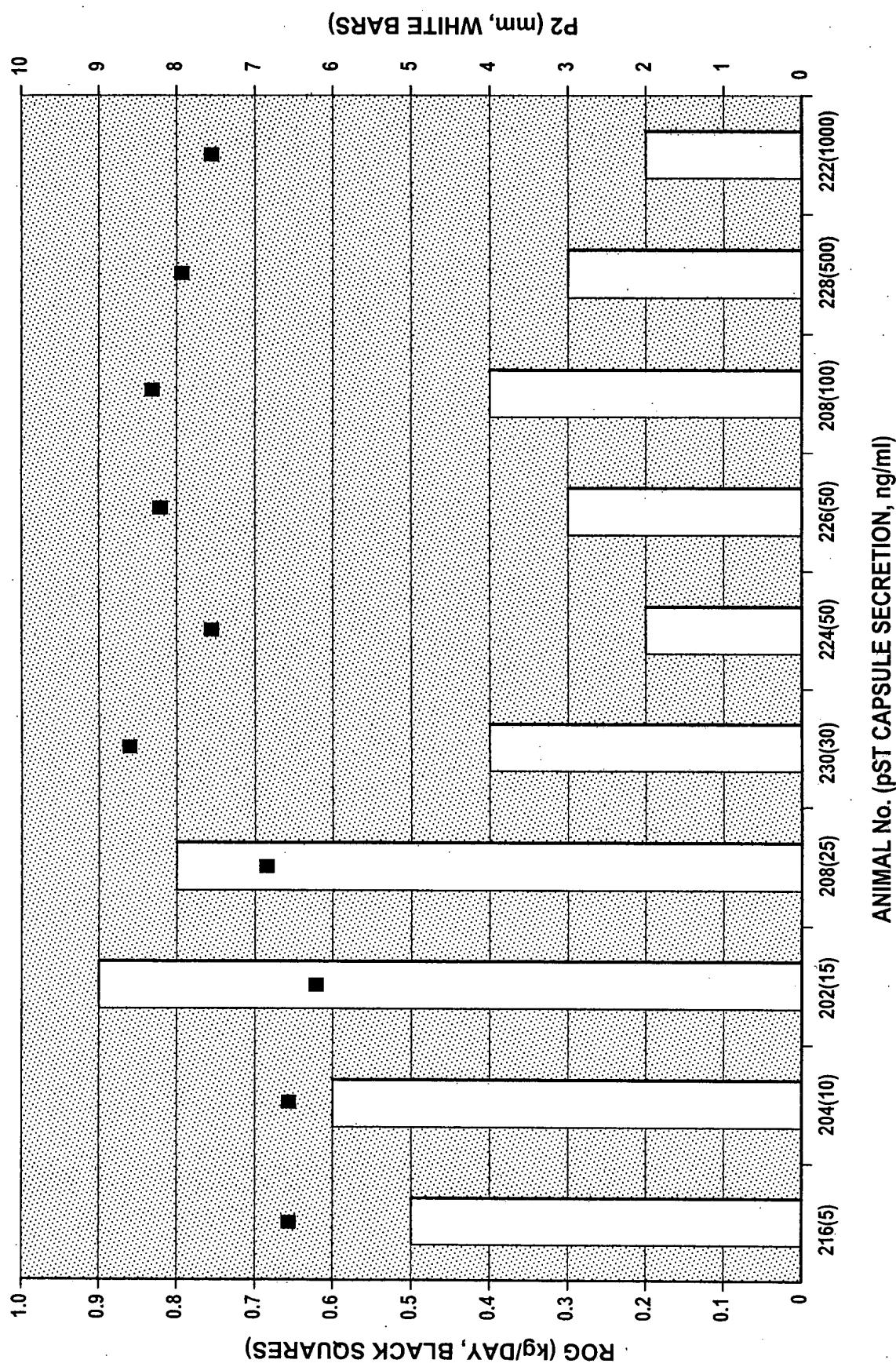


Fig. 10

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RATE OF GAIN OF MALE PIGS FOLLOWING IMPLANTATION WITH pST SECRETING OR CONTROL IMMUNO-NEUTRAL GENE THERAPY (IGT) CAPSULES ( $\pm$  SEM).

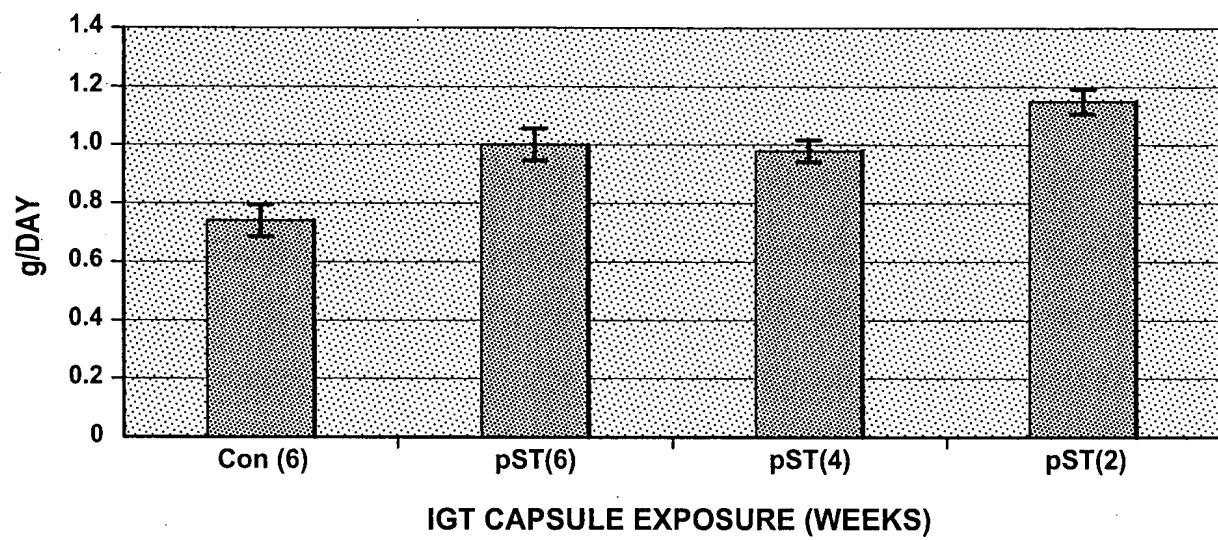
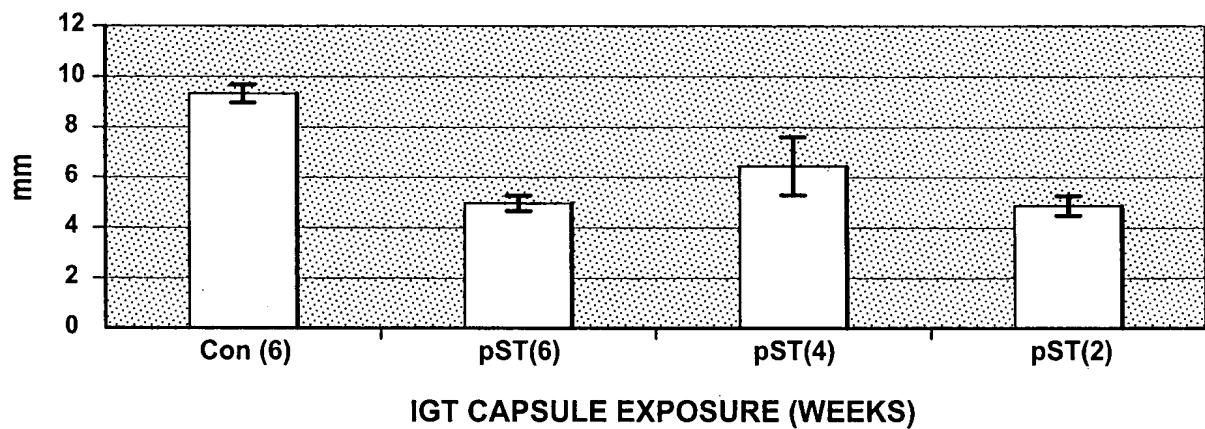


Fig. 11

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**BACK FAT (P2) OF MALE PIGS FOLLOWING IMPLANTATION WITH pST SECRETING OR CONTROL IMMUNO-NEUTRAL GENE THERAPY (IGT) CAPSULES ( $\pm$ SEM).**

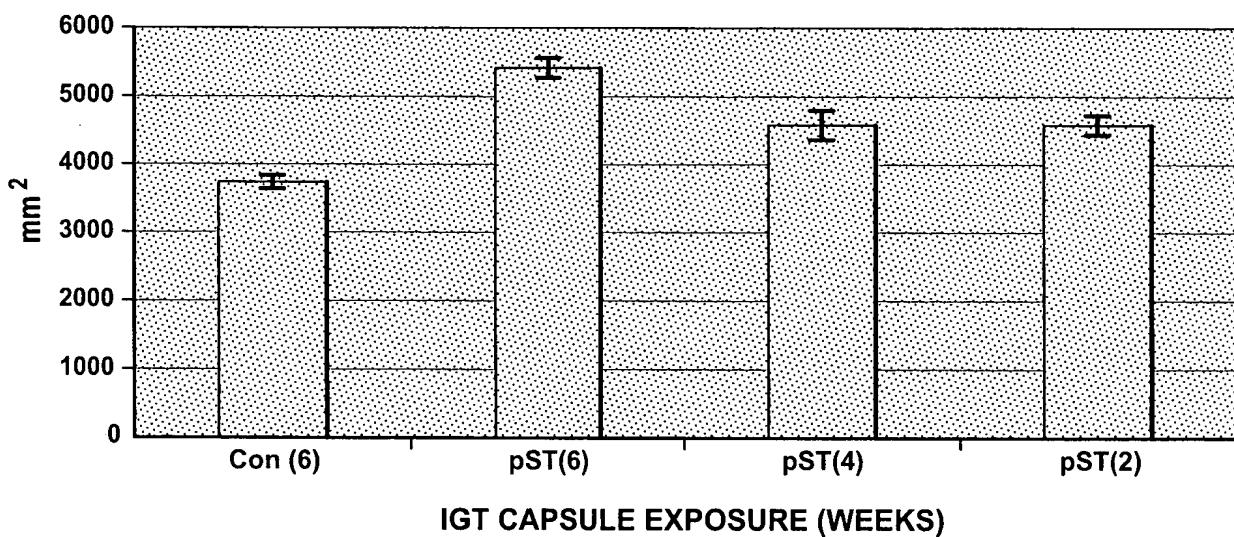


**Fig. 12**

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**LOIN (EYE) MUSCLE AREA OF MALE PIGS FOLLOWING  
IMPLANTATION WITH pST SECRETING  
OR CONTROL IMMUNO-NEUTRAL GENE THERAPY (IGT) CAPSULES ( $\pm$ SEM).**



**Fig. 13**